

PR 92-274

PUBLIC SAFETY RADIO COMMUNICATIONS PLAN

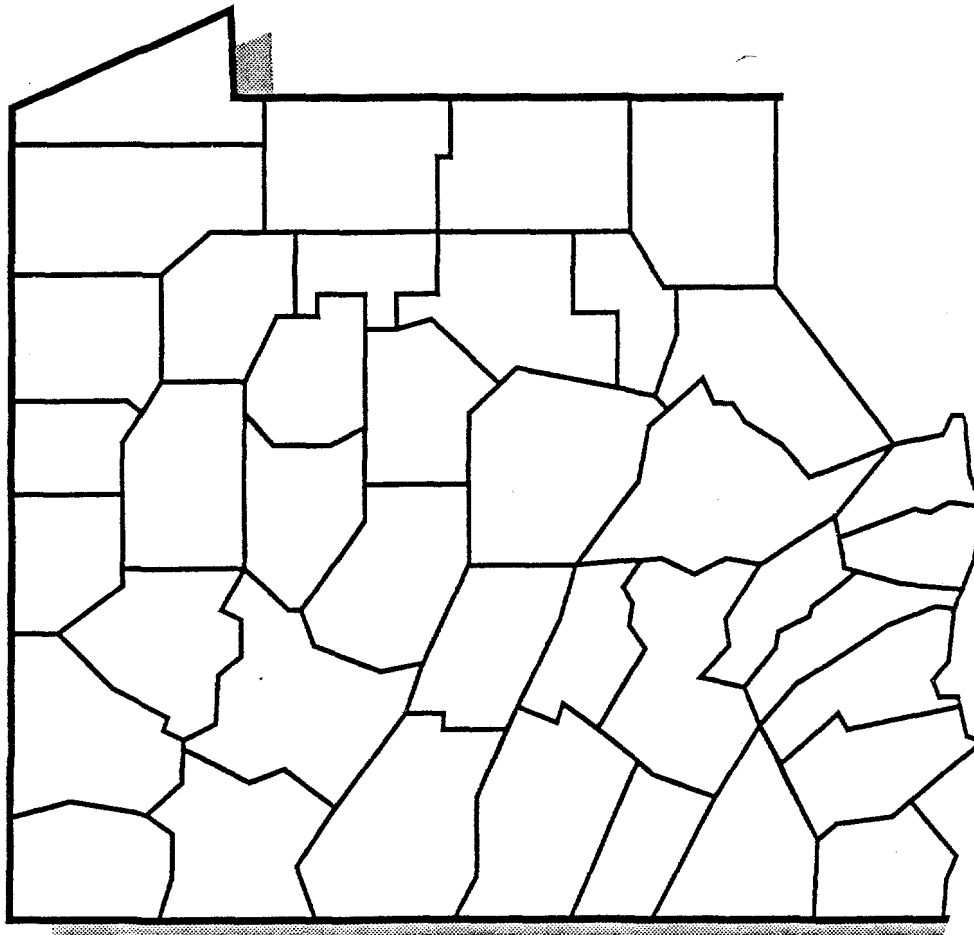
- REGION 36 -
WESTERN PENNSYLVANIA

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Developed in accordance with Federal Communications Commission
General Docket No. 87-112
as adopted November 24, 1987 and released December 18, 1987

FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF THE SECRETARY



NATIONAL PLAN - REGION 36

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October 2, 1992

Ms. Donna Searcy
Secretary
Federal Communications Commission
1919 M Street N.W.
Washington, D.C. 20554

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MAIL BRANCH

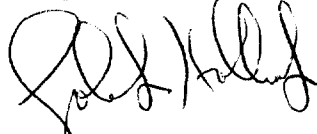
Dear Ms. Searcy:

The Region 36 Planning Committee, for Western Pennsylvania, is pleased to submit one (1) original and (4) copies of its Regional Plan for your review and approval by the Federal Communications Commission. The Committee has made every effort to formulate a plan which insures maximum utilization of the available spectrum for every eligible agency operating within the region.

The Plan represents the best effort of 24 members representing 14 agencies and addresses the concerns expressed by the Federal Communications Commission in its Report and Order terminating Docket 87-112.

Please direct any notices, correspondence or questions regarding this official filing to me.

Respectfully yours,



John S. Hollar Jr., Chairman
Region 36, Planning Committee

cc: Alireza Shahnami, APCO

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REGION 36 PLAN

(As defined in)

FCC Gen. Docket No. 87-112

06-01-92

REGION 36 PLAN
(As defined in)
FCC Gen. Docket No. 87-112

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REGION 36 PLAN APPENDIX INDEX
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F O R W A R D

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FORWARD

Future Planning Requirements

In order to provide realistic planning for public safety communications for the future, it is necessary to have sufficient contiguous radio spectrum at the onset of the planning process. There is a need for public safety contiguous radio spectrum to which an orderly migration from more conventional channels may proceed. The amount of spectrum allocated need not require substantially more spectrum than that already allocated to public safety. Efficiency gained through contiguous spectrum and advanced technology should result in adequate public safety communications. In exchange for contiguous spectrum, existing bands from 30 MHz up to the newly allocated 800 MHz band should be returned for reuse. Should there be insufficient spectrum, the planning effort is reduced to distribution of frequencies with little regard for the efficiencies sought. In urban areas, where frequency need and shortage is greatest, it is likely that the 800 MHz channels will be depleted before any type of significant planning process can make an inroad to the mounting demand for public safety communications. Spectrum sharing could provide short term additional frequencies to some urban areas. However, if the spectrum is not compatible inter-operability of public safety services could be compromised. Spectrum sharing appears available only within the major urban areas. Those areas just outside major urban areas are hardest hit without spectrum at

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either 800 MHz or spectrum sharing. If, at a minimum, this plan could consider 800 MHz and TV sharing, for example, together; a more equitable and longer lasting plan would result. TV sharing could be used for limited coverage urban systems, while 800 MHz would be used for wide area systems which are now beyond the scope of TV sharing. Although allocation of spectrum in a piecemeal fashion appears necessary to satisfy present demand, holding the allocation as a pretext to a comprehensive Public Safety communications plan may not be prudent. Region 36 joins Region 28 in its hope.

SCOPE

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SCOPE

Introduction

When the Federal Communications Commission (FCC) announced the 821 MHz allocation of radio frequencies for the Public Safety Services in July 1986, a National Plan outlining the use of these public safety frequencies would have to be in place before any agency could receive channels from this new allocation. In November 1986, a national meeting of all interested parties was held in Washington, D.C. The Associated Public Safety Communications Officers, Inc., (APCO) was the convener. The major objective of the meeting was to determine the nature of the national plan. In December of 1986, the (FCC) established the National Public Safety Planning Advisory Committee (NPSPAC) bringing together parties interested in Public Safety in the planning effort. The deadline for submission of a final report from NPSPAC was established as September 30, 1987. The deadline was met. The recommendations contained in the Final Report were, for the most part, accepted by the FCC. A Final Report and Order, General Docket No 87-112, was adopted by the Commission, November 24, 1987. The National Plan established planning regions covering all parts of the United States, Puerto Rico, and the U.S. Virgin Islands. The Docket noted that no assignments would be made in the 821-824 and 866-869 MHz bands until a plan for each of the regions had been accepted by the FCC.

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Forty-eight regions were identified in the final docket. Region 36 was identified as the "Western Pennsylvania" Region. However, the area defined in the Docket was in conflict with an area previously defined by an ad hoc regional planning committee, specifically, the Greater Delaware Valley Regional Planning Committee, which had been in existence for over one year. NPSPAC filed a "Petition for Partial Reconsideration and Expedited Action" with the F.C.C. requesting that Region 36 be modified to the Region identified by this Planning Committee.

Purpose

This Regional Plan was developed, as required by the Federal Communications Commission in Docket 87-112, to insure that maximum public benefit be derived from all radio communication systems used by eligibles that come under FCC rules for public safety radio services. Recognizing that Western Pennsylvania is currently not experiencing shortages in the number of radio channels needed by many public safety agencies, the Plan is never-the-less established with the objective of ensuring that unassigned frequencies could be distributed in an equitable fashion to those public safety agencies with the highest demonstrated need and to serve the interests of Commonwealth wide services wishing to establish a Pennsylvania statewide infrastructure in order to insure that the entire 821 MHz spectrum can being utilized in an efficient manner.

Coordination with Adjacent Regions

The importance of coordination of the Region 36 Plan with those of adjacent Regions has been uppermost in the minds of the committee members throughout the planning process. Consequently, the Region 36 Committee is pleased to be associated with members of other committees who also serve on Region 55, Region 33 and Region 28 Committees. The APCO frequency coordinator for Pennsylvania is a member of the Region 36 Committee. In addition, all of the surrounding Regions have been provided with a copy of the Plan and requested to provide their comments prior to filing of this plan. Positive comments were received from Region 55, Region 33, Region 20, and Region 28 and no comments were received from Region 44 (see Appendix K).

Flexibility of the Plan

Although the Plan concentrates on the current needs of the public safety community, there is recognition of the area's future requirements. To this extent the Plan may address such issues as UHF/TV sharing of frequencies, seeking a more restrictive definition of "public safety", channel loading models, introduction of new technologies such as mobile data, digital and simulcast as well as other operational/technical initiatives. Furthermore, as conditions change, the Plan will be modified, when warranted, to reflect such changes.

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AUTHORITY

Regional Planning Committee

The Federal Communications Commission, in its November 24, 1987 Report and Order applicable to Docket 87-112 noted:

The Associated Public-Safety Officers, Inc. (APCO), acting under its frequency coordination responsibilities, will be responsible for convening a meeting to initiate the planning process in each region. For each region, APCO should appoint a local convener who will be responsible for organizing and publicizing the first planning meeting... The convener should set a date for the initial planning meeting, allowing at least 60 days for appropriate public notifications. Parties interested in participating in the regional planning process should contact the appropriate convener.

This was accomplished in Region 36, with the initial meeting being held on August 25, 1988, in the City of Pittsburgh, Public Safety Training Academy, Washington Blvd. & Negley Run Rd. Pittsburgh, Pennsylvania 15206 at 13:00. At that meeting, a board-of-officers was elected, rules of order established, and certain task chairpersons appointed. All attendants were invited to take part in the development of this Regional Plan.

AUTHORITY

National Interrelationships

The Regional Plan is in conformity with the National Plan. If there is a conflict between the two plans, the National Plan will govern. Regional Plans for other nearby areas may differ from the Plan for this area due to dissimilar situations. However, in order to insure uniformity for those applicants in Pennsylvania who require state-wide systems, there is intentional similarity between the Region 36 and the Region 28 Plan. By officially sanctioning this Plan the FCC agrees to its conformity to the National Plan. Nothing in the Plan interferes with the proper functions and duties of any organization appointed by the FCC for frequency coordination in the Private Land Mobile Service. This Plan provides procedures that are the consensus of the Public Safety Radio Services user agencies in the Region as well as in the Pennsylvania portion of Region 28. If there is any perceived conflict, the judgement of the FCC will prevail.

Federal Interoperability

Interoperability between Federal, State and Local Government during both daily and disaster operations will primarily take place on the five (5) common channels identified in the National Plan. Additionally, through the use of S-160 or equivalent agreements, a licensee may permit Federal use of its non-Federal communication system. Such use, on other than the five identified common channels, is to be in full compliance with FCC requirements for government use of non-government frequencies (Title 47 CFR section 2.103). It is permissible for a sub-

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Federal licensee to increase channel requirements to account for up to a 2% increase in mobile units, provided that written documentation from Federal agencies supports at least that number of increased units.

Regional Plan Update Committee

With the approval of the Regional Planning Committee, the Chairman shall appoint a Regional Plan Update Committee (RPUC). This committee will remain in place to recommend changes in the Regional Plan to the FCC and provide a mechanism for interregional resolution of problems which arise.

The standing membership of the RPUC shall consist of the APCO designated local frequency advisor for the Regional Planning Area (one (1) member); plus one (1) each, representing the Commonwealth of Pennsylvania, and/or City of Pittsburgh, and for County Governments (three (3) members); three (3) members will also represent the Public Safety Radio Services with and two (2) members representing the Special Emergency Radio Service (five (5) members), for a total of nine (9) members. In no case shall any radio service have a majority membership.

AUTHORITY

The following rules and procedures shall be established:

- o elect a Chairperson
- o develop a mechanism to fill committee vacancies
- o with FCC approval, modify committee membership
- o set response time to process received frequency applications
- o publish meeting schedule
- o determine committee voting standards
- o develop applicant appeal process
- o audit implementation of those systems subject to the Plan
- o enact policy for frequency give-backs
- o maintain coordination with neighboring Regional committees
- o participate in the annual meeting of all Regional committees
- o promulgate other rules and procedures as required

It should be noted that the FCC will not fund any expenses incurred by the Regional Plan Update Committee.

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SPECTRUM UTILIZATION

This portion of the Plan provides a basis for proper spectrum utilization. Its purpose is to guide the Committee in their task of evaluating the implementation of radio communication systems within the Region.

Region Defined

As mentioned earlier, the Federal Communications Commission's Report and Order, adopted November 24, 1988 (applicable to General Docket No. 87-112), forty-eight Regions were identified. Region 36 was initially identified with having more counties in Pennsylvania resulting from the Region 28 dispute with that area which had been previously identified by the then in place ad hoc committee (The Greater Delaware Valley Regional Planning Committee). A Petition for Partial Reconsideration and Expedited Action was submitted to the FCC requesting that Region 28 be redefined so as to conform with the Regional boundaries established by the then in place ad hoc committees. The FCC granted relief. Region 36 lost counties to Region 28 which now includes half of New Jersey, the entire State of Delaware, specifically the counties of New Castle, Kent and Sussex. Thus, Pennsylvania was divided into two (2) regions. The West Branch Susquehanna River was generally the dividing line.

SPECTRUM UTILIZATION

Usage Guidelines

All systems operating in the FCC Region 36 Planning area, having five (5) or more channels with similar coverages will be required to be trunked. Those systems having four (4) or less channels or with dissimilar coverages may remain conventional.

The FCC in its Report and Order states, "Exceptions will be permitted only when a substantial showing is made that alternative technology would be at least as efficient as trunking or that trunking would not meet operational requirements. Exceptions will not be granted routinely. Strong evidence showing why trunking is unacceptable must be presented in support of any request for exception."

Systems of four or less channels operating in the conventional mode which do not meet FCC loading standards will be required to share frequencies on a non-exclusive basis.

Statewide public safety agencies must submit their communications plans for impact approval if they utilize communications systems the Region.

The next level of communication coverage will be county/multiple municipality areas. Those systems which are designed to provide area communication coverage must demonstrate a need requiring such coverage. Coverages beyond the bounds of a jurisdictional area of concern may not be accepted for consideration unless it is critical to the protection of life and property or a part of frequency sharing. If 821 MHz trunked radio technology is utilized, any system designed should include as many

county/multiple municipality government public safety radio users as possible.

The county/multiple municipality agency or agencies, depending upon systems loading and the need for multiple systems within an area, should provide inter-communications between area systems. In a multi-agency environment, a lead agency which proposes 821 MHz spectrum must construct all of the Common Channels in this band as mandated by the National Plan. Such implementation must be reviewed and approved by the Committee.

Municipal government terminology in differing areas may not be uniform. Thus for the next level of communications will be presumed to be "Township". Township public safety communication should provide for communications need only within its boundaries. However, if the total number of radios in service does not reach minimum loading criteria for a trunked system, a township may be required to utilizing the next higher system level if 821 MHz trunked radio channels are available in the area. As higher level systems reach capacity, smaller system operator are encouraged to consider uniting their communications efforts to formulate one large system or forfeit of allocation of resources at 821 MHz.

Where smaller conventional 821 MHz systems are requested, frequencies assigned will not interfere with a Regional trunked system. 821 MHz trunked radio systems are assumed to be the higher technology and in greater compliance with FCC guidelines. Interfering Radio service that can be tolerated depends on the service affected. Protection of life

SPECTRUM UTILIZATION

and property must receive the highest priority. Destructive interference caused to communications involved in these services must be abated through on going or cessation. Co-channel interference within an authorized area of coverage will be examined on a case-by-case basis. A standard of 12db below system strength will be considered the maximum tolerable interference.

A requesting applicant for radio communications in the 821 MHz public safety services in the Region will be required to provide loading criteria information for its proposed system. The provisions of this Regional Plan must be used as a guide for establishing any new systems. Strict adherence to limiting area of coverage to the boundaries of the applicant's jurisdiction must be observed. Overlapping or extended coverage must be minimized even where systems utilizing 821 MHz trunked radio are proposing to intermix systems for cooperative and/or mutual aid purposes.

Antenna heights are to be limited to provide only the necessary coverage for a system. When antenna locations are restricted to only the "high ground", transmitter outputs and special antenna patterns must be employed to produce the required coverage with a proper amount of ERP. Due diligent must be taken to insure maximum reuse of the limited 821 MHz spectrum.

As part of this plan, distances between transmitters for co-channel reuse may not be held to seventy (70) mile separation. Separation of co-channel transmitters will be determined by the coverage needs of the applicant, natural barriers affecting separation, use of antenna

patterns and limiting ERP's where possible. System tests and/or propagation studies may also be requested in order to establish minimum distances for separation.

Reassignment of Frequencies

It is anticipated that, in all but the most unusual cases, frequencies presently utilized by a licensee will be turned back for reassignment. The FCC authorized frequency coordinator for Pennsylvania will be responsible for assignment of the channels to other various agencies waiting for channels in the lower frequency bands. Normal coordination procedures will be followed with these take-back channels except that the applicant evaluation criteria established in the National Plan and further defined in this Regional Plan included in the consideration by the frequency coordinator for Pennsylvania.

In such cases where specific 821 MHz channels are required by numerous applicants, efforts will be made by the Region to facilitate a settlement prior to the application of the evaluation matrix. At this time the applicant evaluation matrix will be utilized. In all cases, area of coverage criteria and channel loading criteria will be applied, except upon compelling justification for results in receipt of waivers from the Regional Planning Committee. In general it will not be consistent with the goals and objectives of this Region to permit the direct reassignment of radio frequencies as a result of givebacks or 821 MHz allocations between agencies. All frequencies are to be returned to their respective pools to be assigned to the most public beneficial use. Similarly, an agency will not be able to use as sole justification "farm

SPECTRUM UTILIZATION

down" its apposed frequencies to other services within its political subdivision simply to take advantage of surplus equipment. The need for communications by such an agency may be outweighed by the needs of another political subdivision.

This Regional Plan will consider, for planning purposes, the communication needs of all current eligibles under the FCC's Public Safety Radio Services and Special Emergency Radio Services. Additionally, this Regional Plan will consider the communication needs of those public safety service associated operations as the Regional Planning Committee may deem necessary and desirable for Local area needs.

SUPPLEMENT TO THE APPLICATION FORM

With each application form (modified APCO Form FDR2) submitted directly to the local frequency advisor, the applicant shall also supply the following supplemental information:

- * Details of engineering survey showing radio coverage will not exceed applicants minimum requirements.
- * Explain how system will be used to communicate with other services in other bands.
- * A detail the finances required to insure construction of the proposed system within the required period.
- * Explain how system will interface with long distant radio communications such as amateur radio, satellite communications, and/or long-range emergency preparedness communications systems.
- * Statement of need for installing a new 821 MHz system.
- * Explain and certify that the applicant's agency will comply the common channel implementation requirements.
- * Detailed information as to the frequencies presently licensed to the applicant. Which frequencies will be turned back and which will be retained. Justification for any retained frequencies.

SPECTRUM UTILIZATION

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COMMUNICATIONS REQUIREMENTS

Common Channel Implementation

It shall be the responsibility of each agency unless otherwise directed (in the case of data only systems) to provide base station equipment in compliance with the National Plan on the "Calling Channel".

Areas of Operation

The total area of operation shall encompass the Region, as defined elsewhere in the Plan, and shall extend outward to include the total system area of any system of which any portion thereof falls within the Region.

Operation of the Common Channels

Normally, the five interoperable channels are to be used only for activities requiring inter-communications between agencies not sharing any other compatible communications system. Interoperable channels are not to be used by any level agency for daily operations or for inter-agency communications not requiring interoperability. In major emergency situations, one or more tactical channels may be assigned by the primary dispatch center to alleviate temporary communications loading problems. Police, Fire and providers of Basic and Advanced Life support services will be the primary using agencies. Other services provided in their Public Safety Radio Service may also participate to the extent required to insure the safety of the public. School buses or other

COMMUNICATIONS REQUIREMENTS

approved transportation facilities shall be included into interoperability only to the extent that such vehicles are enrolled in an emergency evacuation plan under the auspices of an emergency management agency.

Sub Regions

Region 36 is broken down into sub-regions that conform with state political boundaries. Each sub-region, defined generally as a County or a group of counties, shall establish at least one mobile relay operation for the Calling Channel and the tactical channels assigned. Each dispatch center shall be responsible for the coordination with adjacent dispatch centers as well as with other central points in the region, if required. Any agency operating independently of the county plan (sub-region) shall be required to establish a radio control point on the calling and tactical channel in its area.

OPERATING PROCEDURES

Vocabulary

On all common channels plain ENGLISH will be used at all times, and the use of unfamiliar terms, phrases or codes will not be allowed. Users will be coming from varied backgrounds and disciplines each having its own language. Any attempt to introduce a new code might be delusory and cause confusion, defeat interoperability concept.

Calling Channel (CALL)

The calling channel shall be used to contact other users in the Region that can render assistance at an incident. This channel shall not be utilized as an ongoing working channel. Once contact is made between agencies, an agreed upon tactical or mutual aid channel shall be